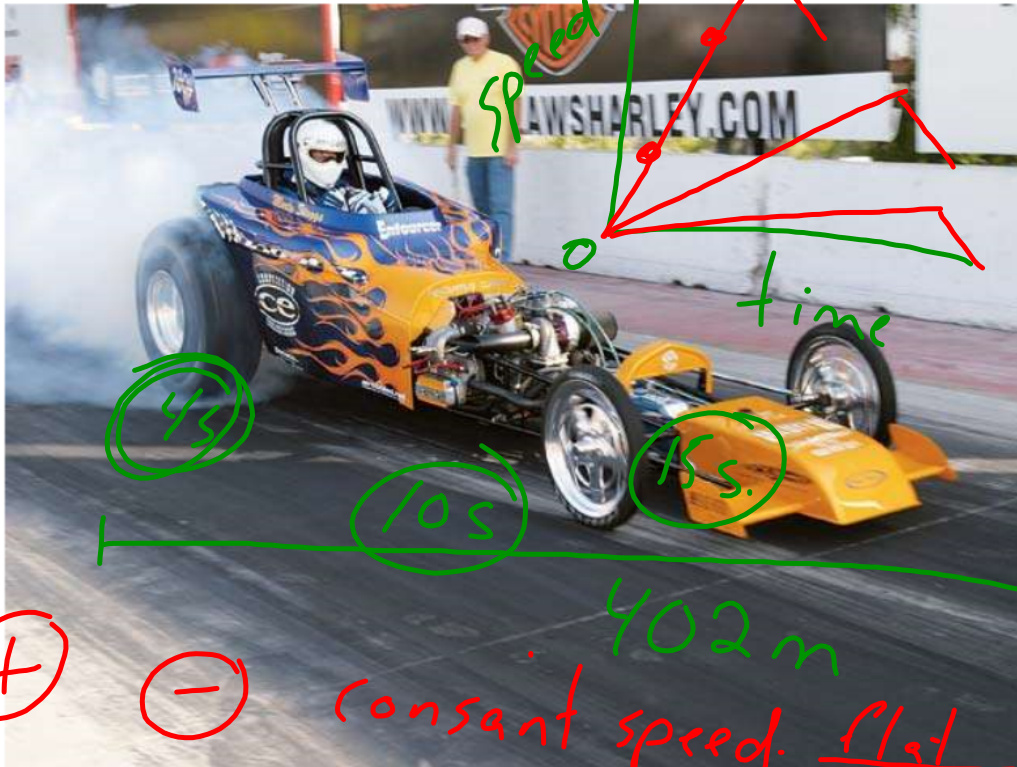


Section 10.3

Jan. 9/18.

Defining Acceleration



Draw graphs to represent the following:

Velocity does not continue at a constant speed forever. There are times that objects in motion either speed up or slow down. This is defined as acceleration

Constant Acceleration - when the ratio of speeding up or slowing down remains the same over a period of time. Flat line.

Average Acceleration - is the average rate of change in speed of an object.

$$\Delta \text{velocity} \quad \Delta v = v_2 - v_1$$

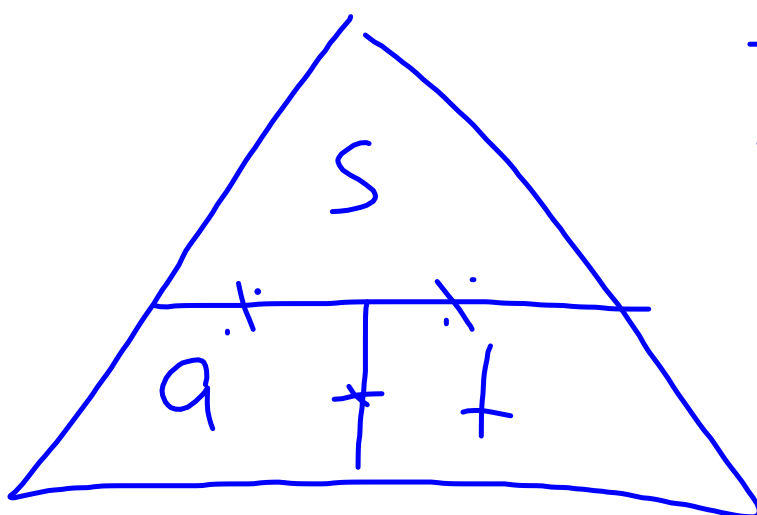
$$A = \frac{\Delta v}{\Delta t}$$

These are the important concepts

$$\Delta \text{time} \quad \Delta t = t_2 - t_1$$

$$A = \frac{S(\text{velocity})}{\text{time.}}$$

$$\frac{m/s}{s} = m/s^2$$



$$\frac{Km.}{h} \quad \frac{Km}{h^2}$$

Speed in a given time.

Speed - $\frac{\text{km}}{\text{h}}$
 - $\frac{\text{m}}{\text{s}}$

} $\frac{\text{miles}}{\text{h}}$
 $\frac{\text{feet}}{\text{s}}$

Time. seconds
 minutes
 hours

Positive acceleration numbers represent objects in motion speeding up

Negative acceleration numbers represents objects in motion slowing down

Work through the sample problems in the text book together in class.

Section 10.4

Speed time graphs for acceleration

The acceleration over time can be represented on graphs similar to average velocity.

The type of slope of a speed time graph tells us a lot about the type of acceleration.

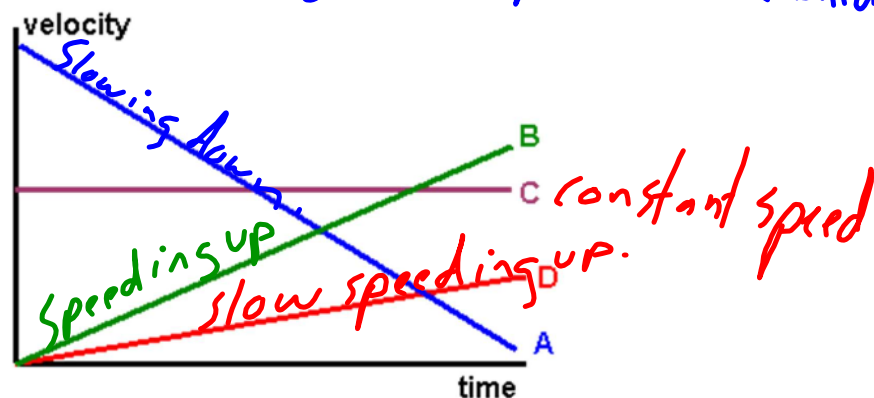
Positive slope - represents positive acceleration, objects speeding up

Negative slope - represents negative acceleration, objects slowing down

The steepness of the slope represents the "size" of the acceleration. What does this mean?

How quickly speed is reached

*Exam.
+
test?*



- A Moderate negative, decreasing speed
- B high positive acceleration
- C Zero acceleration
- D Low positive acceleration

